

Monday, June 08, 2015 3:46:50 PM

133511

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 6/08/15 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 6/08/15 **Req'd Qty:** 4.00 ***/****

Customer:

Reference:

Approvals: Process Plan: M.C.J. Date: JUN 10 2015

Tooling:

Date:

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____

SPC (Y/N):

Date:

Stop ***NR2***

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mis-labeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Work Order ID 133511

Monday, June 08, 2015 3:46:50 PM

133511

Page 2

Item ID: D2938-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle LH Out, 206
Start Date: 6/08/15 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 6/08/15 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
130									
QC	Memo	0.00							SL15-8-11
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00							4 15-8-12
Hand Finishing									
150	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
150									
Powdercoat	Memo	0.00							4 c d 12/08/13
Powder Coating	START TIME: 11:13 OVEN TEMPERATURE: FINISH TIME: 11:42 370								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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							Lead hand / Supervisor Approval Verification																		
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Root Cause		FAULT CATEGORY																							
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Work Order ID 133511

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133511

Page 3

Item ID: D2938-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle LH Out, 206
 Start Date: 6/08/15 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 6/08/15 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							DAS 38 9-89
160						(4)			
QC	Memo	0.00							
Quality Control									AUG 13 2015
170	Identify as per dwg & Stock Location: <u>SI 395</u>	0.00							DAS 26 9-89
170						(4)	JA		
Packaging	Memo	0.00							AUG 13 2015
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.01							
Quality Control									MW AUG 14 2015

MF
15-8-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Picklist Print

Monday, June 08, 2015 3:46:48 PM

Page 1

Work Order ID: 133511

133511

Parent Item: D2938-1

D2938-1

Parent Item Name: Saddle LH Out, 206

Start Date: 6/08/15

Required Date: 6/08/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: B 00.06.26 New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003		Manufactured	No			100	Each	0.0000	1	4		DAS 37 9-89	
D6101-003									**			15.07.02	

Saddle Billet, 7075

3132646

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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DART AEROSPACE LTD	Work Order:	133511
Description: 206 Saddle, Outboard, Left side	Part Number:	D2938-1
Inspection Dwg: D2938 Rev. C		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2938 Rev. C and record below:

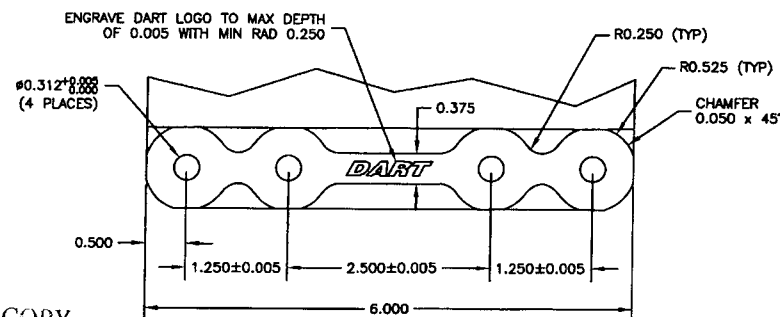
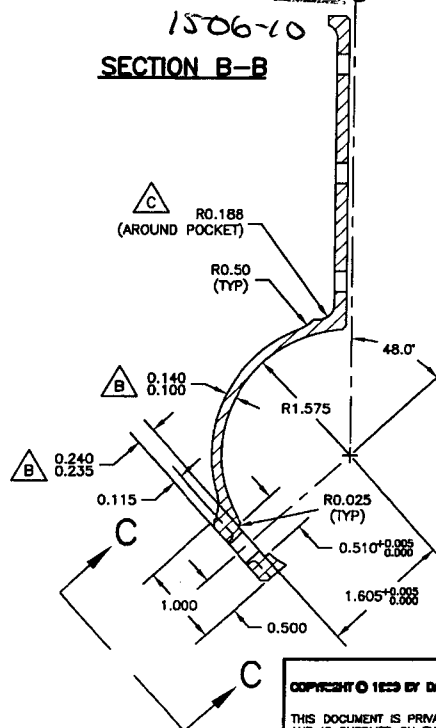
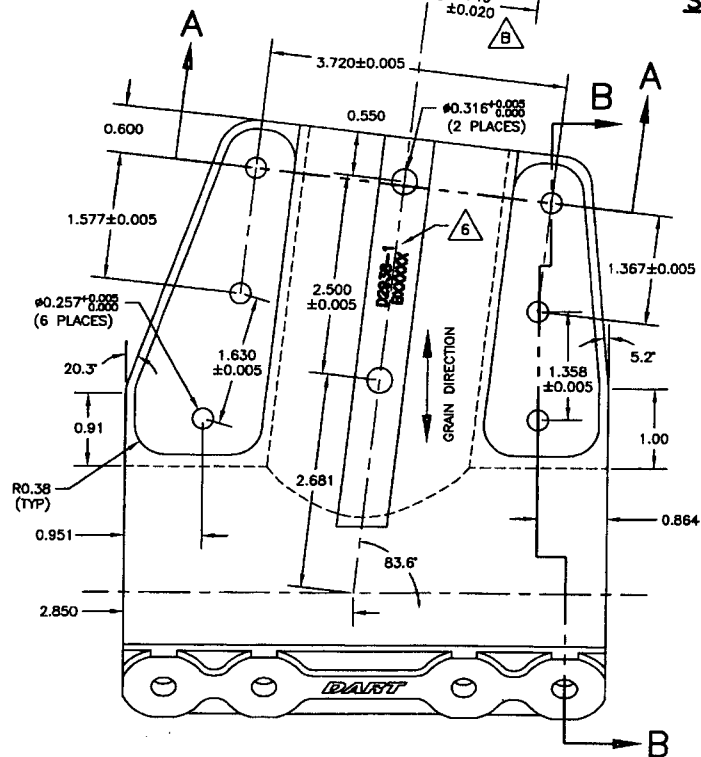
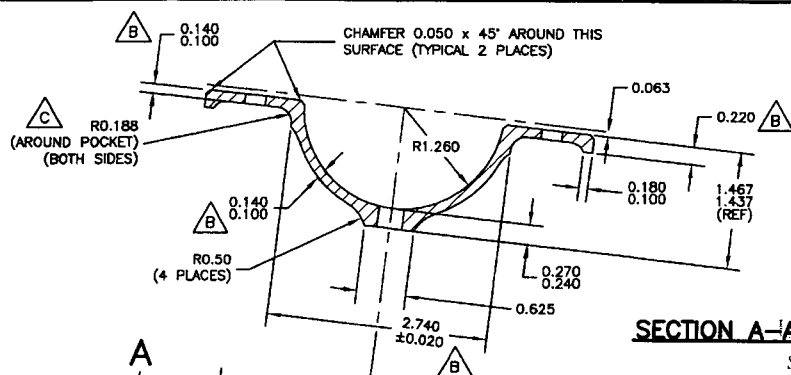
Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.100	0.140		0.122	0.126	0.122	0.119		
B	0.100	0.140		0.120	0.122	0.120	0.117		
C	0.100	0.140		0.112	0.113	0.108	0.108		
D	0.210	0.230		0.213	0.211	0.210	0.212		
E	1.245	1.255		1.250	1.250	1.250	1.250		
F	1.245	1.255		1.250	1.250	1.250	1.250		
G	2.495	2.505		2.500	2.500	2.500	2.500		
H	0.510	0.515		.511	.511	.511	.511		
I	1.572	1.582		1.577	1.577	1.577	1.577		
J	2.495	2.505		2.500	2.500	2.500	2.500		
K	0.257	0.262		.257	.257	.257	.257		
L	0.312	0.317		.314	.314	.314	.314		
M	0.235	0.240		.240	.240	.240	.240		
N	0.100	0.140		0.118	0.117	0.113	0.118		
O	0.540	0.560		0.548	0.550	0.550	0.550		
P	0.490	0.510		0.5025	0.5025	0.5025	0.5025		
Q	3.715	3.725		3.720	3.720	3.720	3.720		
R	2.720	2.760		2.740	2.740	2.740	2.740		
S	0.240	0.270			0.250	0.245	0.243		
T	0.100	0.180		0.138	0.138	0.138	0.138		
U	1.625	1.635		1.630	1.630	1.630	1.630		
V	1.362	1.372		1.367	1.367	1.367	1.367		
W	0.316	0.321		.316	.316	.316	.316		
X	1.250	1.270	MEASURED IN	1.260	1.258	1.259	1.264		
Y	1.565	1.585	HANS #2	1.574	1.5706	1.572	1.5766		
Z	0.178	0.198		.188	.188	.188	.188		
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									

Accept/Reject

Measured by:	37	DAS	08	15/09/11	DAS
Date:	15-07-07	9-89	40		9-89

Audited by:	SL
Date:	15-8-11

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	



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WORK ORDER
NO. 133511 MJS

SECTION B-B

VIEW C-C

D2938-1 LH SADDLE (SHOWN)
D2938-2 RH SADDLE (OPPOSITE)

NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-003 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.11.12	NEW ISSUE
DESIGN	DRAWN BY	DART DART AEROSPACE USA, INC. BELLEVILLE, VA
CHECKED	APPROVED	DRAWING NO. D2938
DATE	TITLE	SCALE
06.11.09	SADDLE OUTSIDE	2:3

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DART AEROSPACE USA, INC.

07.02.12



Part Number: D2938-1	Rev: C	- Page 1 -
Description: SADDLE OUTSIDE	Inspection Dwg: D2938	Work Order: 133511

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
1	1.260	+0.010/-0.010	1.250	1.250	1.250	1.250	
2	0.063	+0.010/-0.010	0.053	0.053	0.053	0.053	
3	0.220	+0.010/-0.010	0.219	0.220	0.220	0.219	
4	1.452	+0.015/-0.015	1.447	1.447	1.447	1.445	
5	0.120	+0.020/-0.020	0.121	0.120	0.120	0.116	
6	0.312	+0.005/0.000	0.312	0.312	0.312	0.312	
7	0.500	+0.010/-0.010	0.504	0.502	0.500	0.503	
8	1.250	+0.005/-0.005	1.250	1.251	1.250	1.250	
9	2.500	+0.005/-0.005	2.500	2.499	2.500	2.500	
10	1.250	+0.005/-0.005	1.250	1.250	1.250	1.250	
11	6.000	+0.010/-0.010	6.003	6.002	6.002	6.003	
12	0.063	+0.010/-0.010	0.060	0.062	0.058	0.063	
Ang13	48.000	+0.500/-0.500	47.510	47.762	47.902	47.712	
14	1.575	+0.010/-0.010	1.570	1.570	1.572	1.571	
15	1.605	+0.005/0.000	1.607	1.605	1.606	1.606	
16	0.500	+0.010/-0.010	0.500	0.503	0.503	0.502	
17	0.500	+0.010/-0.010	0.502	0.506	0.508	0.504	
18	0.115	+0.010/-0.010	0.117	0.116	0.118	0.117	
19	0.235	+0.005/0.000	0.240	0.240	0.240	0.240	
20	0.864	+0.010/-0.010	0.868	0.866	0.866	0.866	
21	5.200	+0.500/-0.500	5.222	5.205	5.215	5.194	
22	1.359	+0.005/-0.005	1.357	1.358	1.356	1.358	
23	1.367	+0.005/-0.005	1.367	1.367	1.366	1.370	
24	0.316	+0.005/0.000	0.316	0.316	0.316	0.316	
25	0.550	+0.010/-0.010	0.550	0.551	0.552	0.553	
26	3.720	+0.005/-0.005	3.721	3.718	3.717	3.720	
27	0.600	+0.010/-0.010	0.596	0.599	0.600	0.602	
28	1.577	+0.005/-0.005	1.578	1.574	1.577	1.574	
29	2.500	+0.005/-0.005	2.499	2.499	2.499	2.499	
30	0.257	+0.005/0.000	0.257	0.258	0.258	0.258	
31	1.630	+0.005/-0.005	1.629	1.633	1.630	1.631	

Measured by:
Mathieu Lamarche

Date:
2015-8-11

Audited by:

Date:

JK
15-8-11



Part Number: D2938-1	Rev: C	- Page 2 -
Description: SADDLE OUTSIDE	Inspection Dwg: D2938	Work Order: 133511

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
32	20.300	+0.500/-0.500	20.228	20.255	20.309	20.249	
33	0.951	+0.010/-0.010	0.952	0.950	0.953	0.950	
34	2.850	+0.010/-0.010	2.854	2.852	2.851	2.852	
35	2.681	+0.010/-0.010	2.680	2.680	2.681	2.679	
36	83.600	+0.500/-0.500	83.562	83.555	83.566	83.557	
D37	0.375	+0.010/-0.010	0.377	0.378	0.380	0.380	
D38	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D39	0.188	+0.010/-0.010	0.188	0.188	0.188	0.188	
D40	0.120	+0.020/-0.020	0.110	0.111	0.106	0.105	
D41	0.510	+0.005/0.000	0.513	0.512	0.512	0.512	
D42	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D43	0.120	+0.020/-0.020	0.124	0.124	0.121	0.122	
D44	0.140	+0.040/-0.040	0.140	0.140	0.140	0.140	
D45	0.255	+0.015/-0.015	0.249	0.248	0.249	0.249	
D46	0.625	+0.010/-0.010	0.635	0.635	0.635	0.635	
D47	2.740	+0.020/-0.020	2.741	2.741	2.741	2.741	
D48	0.120	+0.020/-0.020	0.127	0.127	0.123	0.123	

Measured by: Mathieu Lamarche
Date: 2015-8-11

Audited by: SL
Date: 15-8-11